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ABSTRACT

One of six information booklets with accompanying training materials for the Medicaid Early and Periodic Screening Diagnosis and Treatment (EPSDT) program, this booklet describes the stages of child growth and development and some of the health problems which EPSDT clients might have. Section I describes tests commonly included in an EPSDT screening program. Section II overviews five stages of child growth and development: pregnancy, infancy, early childhood, childhood and adolescence. Child safety considerations are emphasized and issues faced during adolescence are discussed. Section III indicates the pattern of non-use of health care systems among EPSDT clients and provides guidelines for establishing a good relationship between parents and their child's doctor. Section IV discusses selected health problems which EPSDT clients are likely to have and about which EPSDT workers may want information. Health problems in the following categories are defined: anemia, child abuse, dental health, diabetes, hearing and speech, high blood pressure, immunization, lead poisoning, malnutrition, obesity, parasites, rheumatic fever, sickle cell conditions, skin problems, substance abuse, tuberculosis, venereal disease, vision. Treatment procedures and implications for the EPSDT worker are indicated. Section V lists selected references. (Author/RH)

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Health Care Financing Administration
United States Department of Health, Education and Welfare

EPSDT: CHILD HEALTH

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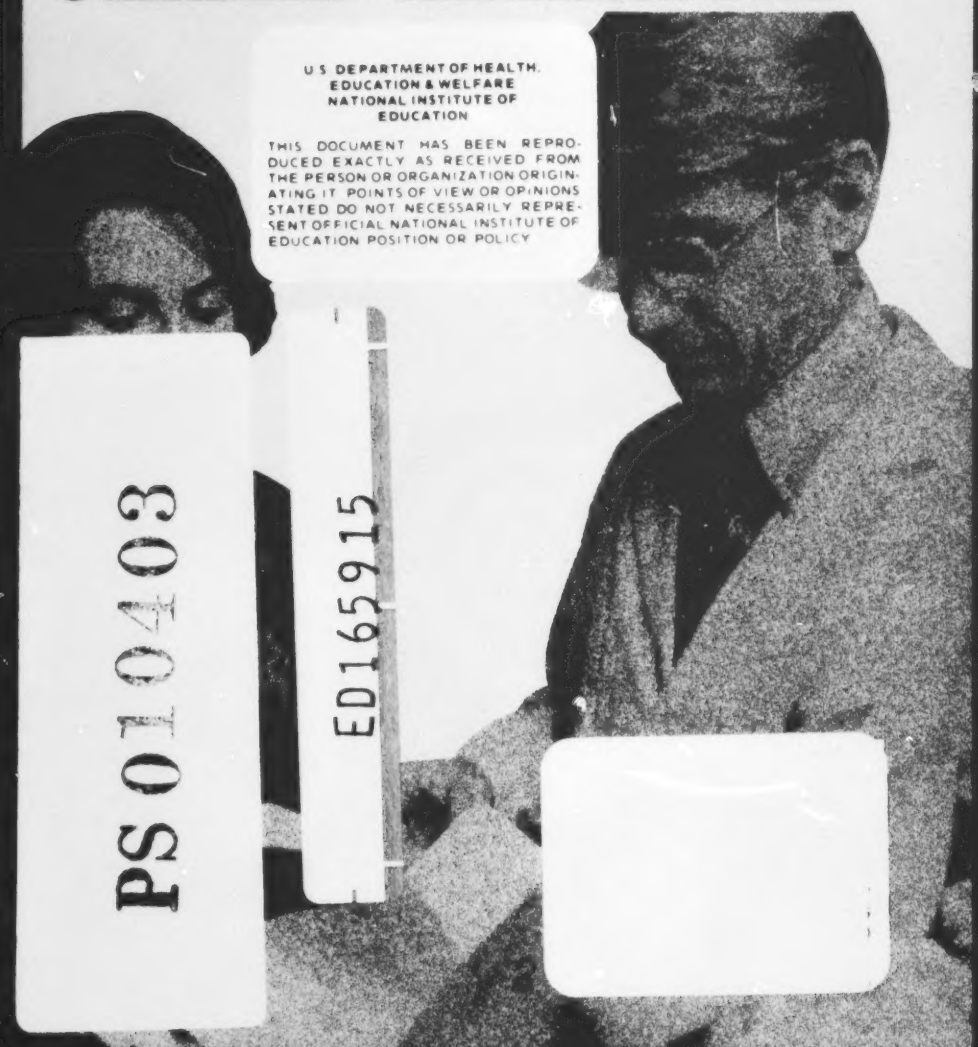

SPECIAL NOTE

Since the Child Health Assessment Act of 1977 (CHAP) is currently pending in Congress, the requirements of this new legislation have been reflected in the final editing of this document.

CHILD HEALTH INFORMATION FOR WORKERS IN THE MEDICAID EARLY AND PERIODIC SCREENING DIAGNOSIS AND TREATMENT PROGRAM

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This is one of six information booklets with accompanying training materials for the Medicaid Early and Periodic Screening Diagnosis and Treatment (EPSDT) program. These materials were prepared for the United States Department of Health, Education and Welfare by the EPSDT Training Materials Development Project at The University of Michigan, a collaborative effort of the School of Public Health (Department of Medical Care Organization and Program in Maternal and Child Health) and the School of Social Work (Program for Continuing Education in the Human Services). Project Co-Directors are Eugene Feingold, Ph.D., Armand Lauffer, Ph.D., and Ruben Meyer, M.D. All products were prepared under grant number 47 P 90036/5-01 from Public Services Administration, Office of Human Development, U.S. Department of Health, Education and Welfare under authority of Section 426 of the Social Security Act.

Additional copies of this and other project materials are available from the U.S. Department of Health, Education and Welfare, Health Care Financing Administration, The Medicaid Bureau, Office of Child Health, Washington, D.C. 20201.

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NOTE TO THE READER

Medicaid programs can vary among states. Each state establishes its own criteria of eligibility and defines its own package of services within federal guidelines. This booklet attempts to discuss some of the features of the Medicaid Early and Periodic Screening Diagnosis and Treatment program which are common to all states, and to illustrate some variations in their implementation.

Although the term EPSDT is used throughout the booklet, the programs providing periodic child health screening, diagnosis, and treatment may have different names in different states (e.g. Child Health Assurance Program—CHAP—in New York; Medi-Check in Illinois; Project Health in Michigan, etc.).

INTRODUCTION

This booklet is designed for EPSDT workers. It describes the stages of child growth and development, and some of the health problems which EPSDT clients might have. A general knowledge of child development and health problems may help EPSDT workers assist their clients.

SECTION I

EPSDT SCREENING AND NORMAL CHILD DEVELOPMENT

The procedures in an EPSDT screening examination are designed to assess growth, development, and health. They follow the same general pattern for all children, but are tailored to the particular child's age, sex, race, and probable health difficulties. For example, white children are not tested for the presence of sickle cells because white people are not susceptible to this disease. In some rural areas, lead absorption from paint is not a major problem and tests for lead poisoning are not as important as they are in some urban areas where exposure to the peeling paint and plaster in older homes and apartments increases the risk of disease from the lead in these products. Different screening tests are used to assess development at various stages of a child's life. In this way EPSDT screening remains relevant throughout childhood and adolescence.

The following inventory of screening procedures describes tests commonly included in an EPSDT screening program.

INVENTORY OF COMMON EPSDT SCREENING PROCEDURES

SCREENING FOR:	*PURPOSE:*
MEDICAL HISTORY	The medical history is the first step in assessing health status. It provides a profile of a child or youth's previous health care and describes any previous health problems.
PHYSICAL EXAMINATION	The physical examination helps the screening staff discover those diseases and health problems for which no standard screening tests have been developed, including evidence of child abuse and/or neglect. The examination includes a complete head-to-toe inspection, blood pressure, temperature measurement, and observation of movement and coordination.
IMMUNIZATION STATUS Diptheria, Lockjaw (Tetanus), Polio, Measles (Rubeola), German Measles (Rubella), Mumps, Whooping Cough (Pertussis)	A check on immunization status is done to ensure that every child is protected from preventable diseases at the earliest possible age. If a child has not been immunized or has fallen behind in her/his immunization program, immunization may be provided at the screening visit.
DENTAL DISEASE TREATMENT	Since it can be predicted that almost all children will need dental diagnostic and treatment procedures, a component of dental services is included in EPSDT to assure access to dental care, to establish a permanent dental record, and to refer the child back to the dentist for periodic evaluation and treatment.
EYE PROBLEMS	Eyes are examined to detect visual impairments which could interfere with the development and education of the child.
HEARING	Hearing is checked to identify children who have reduced hearing sufficient to interfere with their social life and educational achievement.

SCREENING FOR:	*PURPOSE:*
GROWTH ASSESSMENT	Children are measured and weighed to help identify diseases or conditions which interfere with normal growth; for example, undernutrition or neglect.
DEVELOPMENT	Developmental assessment (an appraisal of the child's progress in terms of defined milestones of organic and functional development) is used to identify children who significantly differ from the average in psychological, neurological, emotional, or physical development. When problems are discovered, referral is made to remedial or compensatory services.
TUBERCULIN SENSITIVITY	In populations where tuberculosis is present, a test for tuberculin sensitivity is used to discover tuberculosis infection. Infected children should be treated.
BACTERIURIA	A urine specimen is examined to identify individuals who have urinary tract infections but no symptoms. Undetected urinary tract infections can lead to permanent kidney damage.
ANEMIA	A blood sample is drawn and analyzed to identify iron-deficiency anemia which may result from poor nutritional practices.
LEAD ABSORPTION	Blood lead level is assessed to prevent disability and death from lead poisoning and to alert public health officials so that they can find the source of the lead poisoning.
SICKLE CELL	Sickle cell is a genetic condition of the red blood cells found among black people. A mild form is called sickle cell trait and a severe form is called sickle cell anemia. People with sickle cell anemia are referred for the relief of symptoms. People with sickle cell are given information and counseling to help them make informed decisions about reproduction.

THE IDEA OF NORMAL

Screening and diagnosis are designed to detect abnormalities in child health and development. Many of us have a "common sense" idea of normal and abnormal health and development. A mother generally knows when her child is normally active or abnormally quiet. When her child is not acting normally she might suspect illness. Such common sense ideas of normalcy help us recognize when something might be wrong with a person's health.

At times, however, our knowledge of what is normal and abnormal may be unclear or incomplete. Some of our common sense ideas may be based on assumptions which science has disproved. Although scientific norms for all aspects of human health and behavior have not been established, it is important to integrate our common sense understanding of normalcy with the scientific knowledge which we do have. One way to do this is by asking a physician or trained health worker for advice about medical problems and for information about health care.

HEALTH EDUCATION

Clear and accurate knowledge about a child's health, behavior, and development can help parents, their children, and EPSDT workers recognize abnormality and health problems. EPSDT workers should be able to provide basic health information, but should refer specific questions about a child's health to a physician or other qualified health care provider.

SECTION II

STAGES—GROWTH AND DEVELOPMENT

Growth and development can be viewed as a series of stages from infancy to adulthood. These stages are described below, and the average ages at which they occur are given. Since each child progresses at his or her own rate, a particular child may perform an activity before or after the stated age. While these stages may occur at different ages for different children, they follow in the same order for every child. The stages of child development are:

Pregnancy:	conception—to birth
Infancy:	birth to one year
Early Childhood:	one year to four or five years
Childhood:	five or six to about twelve or thirteen
Adolescence:	thirteen or fourteen to about eighteen to twenty-one

PREGNANCY

The first stage in human development begins when a woman becomes pregnant. The development of the human organism takes about nine months, after which a baby is born. During the early months of pregnancy the new organism is called an embryo. After three months of development it is called a fetus.

Physical signs of pregnancy include a halt in menstrual periods; tenderness, sensitivity, or a full feeling in the breasts; nausea; vomiting; and more frequent urination. The only sure proof of pregnancy, however, is obtained with a laboratory test which can be administered by a physician. A woman should report to her physician as soon as she suspects that she is pregnant. If she is pregnant and there are no complications, she should see her physician every four to six weeks for the first seven months of her pregnancy, every two to three weeks for

the next month and a half, and every week from the thirty-seventh week until delivery of the baby, which usually takes place during the fortieth week of pregnancy. The physician will take a medical history, conduct a physical examination, order laboratory tests, and prescribe drugs, vitamins, and other items of medical care as required.

Most pregnancies proceed without complications, but should a problem arise, regular contact with a physician will assure that it is detected early and that steps are taken to avoid serious consequences.

INFANCY the first year

New born babies average between seven and eight pounds in weight and are about twenty inches long. Because the baby was in a fetal position before birth, the legs appear slightly bowed, and the feet may look pigeon-toed, but this usually corrects itself. Babies are born with a soft spot on top of the head where the skull bones have not joined. It is protected by a tough membrane and takes about a year to close. While a new born baby can see light, the eyes cannot focus, and newborns are hardly aware of their surroundings. A baby will cry whenever hungry or uncomfortable and sleep for about two-thirds of the day.

Babies are calmed by being held and fed and by hearing soothing noises. Since a baby can detect the emotional state of other people, especially the state of the person holding the baby, parents should try to be familiar and comfortable with their infant and not convey tension or anxiety.

There are a number of indicators of growth and development which can tell a health worker whether or not a baby is developing normally. Babies usually gain about a pound and a half and grow about an inch during the first month. Muscles develop as the baby learns to move and gain coordination, but this takes time. In the first couple of months, the head tends to sag if the baby sits up because neck muscles are not yet strong enough to hold it, but the baby may be able to hold the head up when lying on the stomach. Arms and legs are still uncontrolled and the baby tends to thrash them about aimlessly. This is, however, a sign that the baby is learning bodily control and is

the kind of thing that a health worker or physician looks for to determine whether a baby is developing normally.

After about a month, babies start to make noises besides crying, and it is good for parents to repeat these noises and talk to the baby in words. Speaking normally to the baby, rather than in baby talk, teaches conversational speaking tones.

After about two months a baby begins to develop a sense of the surrounding world and external environment. For instance, a baby may stop crying at the sight of mother's breast or the bottle. The baby has learned to associate this feature of the environment with satisfaction and relief from hunger. Feeding is one of the first skills learned but learning to eat with adults and older children takes time. When spoon feeding begins, the baby may seem to spit food out or let it dribble out of the mouth. This does not mean that the baby does not like it, rather, that swallowing food from a spoon must be learned.

By the age of three months a baby's eyes can focus and follow a moving object. The baby can hold the head up but cannot sit without support, and is gaining more control over arms and legs. At this age, babies are likely to thrash about with arms and legs when excited and roll over and move about with more purpose. Three-month-old babies begin to show interest in their hands, feet, and clothing and begin to play with toys. Parents should take precautions about a baby's playthings. Toys should not have rough edges, should be unbreakable, and should be large enough so that a baby can't swallow them. They should not be coated with paint which can come off in the baby's mouth or be harmful if swallowed.

By six months of age, a baby is spending some time playing alone, "talking" to his or her toys, and listening to these sounds. At this time, babies begin to use more sounds, to be aware of differences in faces, and to recognize familiar people.

A baby of nine months can sit up without support, can handle things better, has learned to use the thumb and forefinger when lifting things, and can pick up tiny objects from a flat surface. By now the baby is able to crawl and is starting to pull up to a standing position. Nine-month-old babies are learning to speak, and although little of this "baby talk" has any meaning, it is beginning to take on the tones of real conversation. This jabbering is the baby's way of imitating normal conversational voices and real words, and is important practice. A

baby will learn to talk more quickly if parents do not use baby talk but try to engage the baby in real conversations.

By one year of age a baby usually weighs about three times the birth weight and has grown about one-third longer than at birth. Six to eight teeth have probably developed, and the baby is able to move around quite well by creeping and sliding. At this age first steps are wobbly, and the baby must be supported. Falls are to be expected as the baby learns balance in a standing position.

Safety During the First Year

Maintaining a clean, safe environment is important since babies are quite susceptible to illness and injury. Infants cannot protect or care for themselves, and the responsibility for their well-being rests with the parents. EPSDT caseworkers can help parents by advising them about homemaker or other social services which might be needed and by emphasizing the importance of safety for infants. Parents should understand that infants cannot really learn what is dangerous, no matter how often parents tell them. For an infant, safety is entirely a job of protection. Accidents are the number-one killers of children, and infants are particularly vulnerable. EPSDT workers should emphasize that infant deaths can be prevented with proper protective measures taken by parents who know what dangers to avoid. Following is a checklist of potential dangers and safety hints.

CHILD SAFETY HINTS—INFANCY

Crib

- Slats should be no more than three inches apart.
- Nothing should be in the crib that can get around a baby's face and block breathing; mattress should be firm, no loose clothes or blankets, no pillows, NO PLASTIC BAGS, even under sheets.
- Crib must be painted with unpeeling, lead-free paint.

Household habits

- Never leave baby alone on a high surface or in a tub.
- Keep all small (swallowable) objects completely out of play area. Toys must be too large to fit in a baby's mouth and should be unbreakable.
- Keep an infant away from stove, cigarettes, and hot liquids and out of the kitchen entirely when hot things are being handled. Furthermore, parents should not try to hold an infant when they are also holding something hot.
- Flammable fabrics should be avoided.
- Electric outlets are particularly dangerous as are plugs and lamp wires.

Poison

- Cupboards and closets should have a lock on them.
- Dangerous chemicals, paints, and cleaners should be stored in the basement or garage where a baby can't get at them. They should never be kept in soda, milk, or juice containers.
- Safety caps should be used on all medicines and medicines should be kept away from the baby. It is all to easy for an infant who is used to putting everything in his or her mouth to be poisoned from common household items or pills.

Car Safety

- An infant is safest in a strapped-in car bed in the back seat. A baby who can sit up should ride in a well-anchored car seat.
- Remember, auto accidents account for the greatest number of children's accidental deaths.

EARLY CHILDHOOD 1-3 years

Between the ages of one and one-and-a-half, children may begin to say a few words, but cannot yet talk. They can, however, understand simple questions and may be able to hand you a toy if you ask for it. At this age, they can begin to cooperate when being dressed, and can move around well. Interest in the surrounding world is growing, and a young child may be allowed to explore certain limited areas of the home; however, anything which could hurt the child, or which he or she might damage, should be removed.

As emotions other than pleasure and pain develop, the young child is likely to cry in anger, fear, jealousy, or frustration as well as pain. The child may seem sulkier than before, but parents should not be upset by this since the development of "unpleasant" emotions is a necessary and important part of growing up. Socially, babies can now relate to adults and older "caretaking" children for attention, but do not really pay attention to playmates. At this stage, they "play" with each other much like they would with a nonliving object, and tend to either poke, push, or ignore each other. Parents are the child's major social focus and young children are likely to become anxious over separation from parents. This is to be expected, especially if the child must adjust to other transitions, such as moving to a new residence.

By the time a child is a year-and-a-half-old, much of the "baby" look is gone and physical growth is beginning to slow down. Development, however, is proceeding in a number of areas. Although children at this age may walk rather stiffly, they do so without frequent falling, can begin to run awkwardly, and perhaps climb up stairs with support, although going down stairs is harder. By now, sitting up in a chair is possible, and as increased manual skills develop, play becomes more varied and involves "whole body" activities, such as playing with balls, climbing, and pushing and pulling toys. Hand toys, like blocks, let a child practice newly gained manual skills, while feeling things such as fur, metal, paper, gelatin, mud, sand, or water helps the child learn to identify items by appearance.

Between the age of one-and-a-half and two-and-a-half,

language ability improves to the point where the child can name common objects or pictures and understands a number of words, though not whole sentences. By about two years of age the child's vocabulary begins to include personal pronouns such as "I," "me," and "you." This is a sign of an increasing sense of the self as a separate independent person. The child of two years, however, is not ready to be fully independent and becomes anxious about separation from parents. Socially, the child is still self-centered and does not really play with other children or have a clear idea of others as people. A social sense is developing, however, and as memory improves, the child begins to learn some of the patterns and habits of the family such as when routine comings and goings take place.

As a child gains muscle control, toilet training becomes possible. Since this skill depends on the child's ability to control the sphincter muscles, and since children develop this muscle control at different times, the age at which toilet training begins varies. Signs of readiness include: being able to tell when he or she is wet or soiled; letting parents know about the need to use the toilet; being able to stay dry for periods of two hours or so, and waking up dry from naps. In general the ability to walk is a good indication that muscle control has developed to the point where toilet training is possible.

So far we have discussed a number of indications of normal child development. The following guide to developmental stages during the first three years of life provides a summary of developmental milestones and an approximation of the ages at which these events occur. The ages represented are times at which to expect each event, but since each child progresses at his or her own rate, a particular child may perform an activity before or after the stated age. Clearly, considerable variation from these averages can be expected.

CHILD DEVELOPMENT SCHEDULE

Age	Activity
2 Months	Coos and smiles
3 Months	Holds head up
4 Months	Moves hands purposefully
5 Months	Rolls over, babbles
6 Months	Sits up with assistance
7 Months	Sits up unaided
9-10 Months	Crawls
10-11 Months	Pulls self up
11 Months	Walks with help; stands alone
12 Months	Says "Mama" or "Dada"
12-13 Months	Walks alone
15 Months	Drinks from a cup
18 Months	Runs, has a ten-word vocabulary
24 Months	Daytime control of bowel and bladder
36 Months	Night control of bladder

EARLY CHILDHOOD 3-5 years

The three-year-old child normally has gained about three to four inches and about three to five pounds since age two, has an improved sense of balance, can stand on one foot for several seconds, ride a tricycle, jump down a short distance, and go upstairs one foot per step, though going down may still require putting both feet on each step. The child's vocabulary is increasing and may include some color names, and some numbers; but a child of three is seldom really counting, rather just repeating the numbers from memory like a nursery rhyme. Three-year-olds have learned to ask and answer simple questions; they are becoming less dependent on parents and can occasionally be separated from parents without being upset.

Between the ages of four and five, the child grows about two to three inches and gains about four to six pounds. By now coordination and a sense of rhythm are advanced enough so that the child can skip, first on one foot, then on alternating feet. For many children linguistic ability has developed to the point where counting is possible: that is, the child realizes that each object gets just one "count" and that the last number counted is the sum of the objects. A five-year-old is usually speaking well, has grasped the concept "why," and may continually ask questions.

Imaginative play usually starts at around four, as children make up conversations, pretend to be someone else, and tell "stories." Their imaginations may cause children of this age to fear ghosts, witches, or kidnappers, and a four- or five-year-old may need to keep a light on in order to go to sleep.

At around five, boys and girls are likely to get curious about the differences between their bodies, and about pregnancy, childbirth, and death. When children of this age question parents about such things, it is best for parents to answer their questions truthfully. This will keep the child at ease both with parents and with asking natural questions. While the child may not fully understand explanations and may ask the same questions repeatedly, understanding grows a little more each time a question is repeated and answered. When answering a child's questions, parents should try to use language which the

child can understand and to answer consistently from one time to the next.

SAFETY DURING EARLY CHILDHOOD

Child safety is a continual concern. As children grow older they become able to look out for themselves and can learn rules of safety, but safety for young children is still primarily the parents' responsibility. The safety hints on the following page are especially relevant for young children.

Although safety rules may need to be repeated often before a child learns them, children of three and four can learn such safety rules as not riding a tricycle in a driveway, and never running into the street. Until children learn these rules, they should be watched carefully. The best way for a child to learn about safety is by both example and rules; how to cross a street with an adult, to handle tools and scissors, to ride a tricycle, climb trees, and play around water, are all elements of safety which should be taught gradually as the child's experience broadens. If safety rules and lessons are integrated into the child's daily experience, by the time a child is ready for school, safety will be a habit.

EMERGENCY INFORMATION

Phone numbers of the doctor, hospital, poison control center, police, fire department, drugstore, ambulance, taxi, and social worker should be near the phone. It is a good idea to post these numbers on the wall by the phone and inform babysitters of these emergency numbers. Parents should let a babysitter know where they can be reached if needed, and a sitter should not be left in charge of children unless there is a telephone number to call or person to contact in case of emergency. First-aid items should also be on hand; these include sterile gauze and bandages, scissors, antiseptic, thermometer, etc.

CHILD SAFETY HINTS—EARLY CHILDHOOD

Poisons

Fatal poisonings are most frequent between ages one and two. Poisons include pesticides and medicines, which can be fatal in small doses, and many other common substances—petroleum products, paints, varnishes, cleaning products, furniture polish, lotions and cosmetics, and non-prescription drugs. All these should be kept in rooms the child cannot enter or in locked cabinets. Storing things up high is not a good safety measure because many children are able to climb to get them. All house surfaces should be painted with lead-free products. Paint must not be peeling since this could expose older, leaded paint or plaster. The parent should never call medicine "candy" or say it tastes like candy, and should never remove labels from household products or put them on different containers, especially those which formerly contained food. The information on labels is necessary for treatment of a poison victim.

Household Habits

Parents should be careful to leave nothing dangling which could be pulled down from a surface; hanging tablecloths, dangling phone or electric cords should be tucked back out of reach of the child. Hot pans should be on the back of the stove, handles pointed to the rear. All toys must be painted with unleaded products, should not be easily breakable, and should have no sharp edges. Gates should be placed at stairways, and playing in driveways or streets avoided.

Water

Drowning, a big killer of toddlers, occurs most frequently in or near home, not at beaches and pools. Children should never be unsupervised when there is a chance they might wander off to shallow ponds, creeks, wells, rivers, or lakes. Baths are particularly dangerous if unsupervised, and a young child should not be left alone in the bath even for a short time.

Fire

Parents should keep matches and candles away from children, leave the fireplace screened off, and store electrically heated appliances out of reach.

CHILDHOOD
6 years-puberty

Childhood continues from the age of six until the growth spurt during puberty which marks the beginning of adolescence. During this period, growth is slow—about two inches and perhaps four to six pounds a year. A child of six or seven usually has one or two permanent teeth and is losing the baby fat pads on the cheeks; by the age of eight or nine, the child may have about a dozen permanent teeth.

Children do not grow at the same rate, and much of a child's progress depends on how much chance he or she has had to deal with things that provide an opportunity to develop coordination, muscles, and mental skills. Between ages six and twelve, muscle development rapidly increases and physical alertness, rhythm, and coordination are acquired in running, climbing, swinging, jumping rope, dancing, and team games. Fine muscle control is developed as the child learns to write, draw or paint, play a musical instrument, or build things. Danger from accidents increases during this period of heightened physical activity. By the time children begin school at around age six, their play experience has taught them about the body and about gravity, weight, height, and balance. By six, children usually have a good ability to think about and communicate what they see. Their intellectual skills are developing and they are able to feel pleasure in discovery and accomplishment. They are developing a longer attention span and better memory, and are interested in learning about a variety of new things. It is important to detect and treat children of this age who are having difficulty learning and developing their physical and mental skills. Such early attention can help remedy a problem that might limit a child's learning through the school years.

ISSUES DURING CHILDHOOD

Starting school is a significant social event. It means separation from parents and home and is a milestone in the child's independence which has been developing from the age of two. School attendance is often the first major venture away

from home. Some children may enter school earlier than others, especially if they are enrolled in a preschool program such as Headstart, or some other kind of kindergarten. Whenever it occurs, beginning school is a big step. It places the child in a new environment and introduces new people. Teachers and schoolmates begin to occupy more and more of the child's attention and the child needs less and less help from parents. The naturalness of this growing separation does not mean that a child is not distressed about leaving home to go to school. Although the growing number of outside interests that the child develops compete with home and family as the center of social life, the child continues to want parental approval, acceptance, and emotional support.

Friendships. Interacting with other children helps a child develop skills in leading, following, and dealing with other people. As other children assume a greater importance, a child may gradually turn from trying to please parents to being more concerned with pleasing peers. Secretiveness, less affection towards parents, and less communication with adults in general may mark these changes. As a child discovers common interests and concerns with others, his or her own self image will expand and self confidence will grow.

During the early school years, the sense of right and wrong begins to develop. At first, young children may have rigid ideas of right and wrong and may construct a complicated set of rules; but by the age of eight or nine, children start to think of intentions and circumstances and begin to temper their rules with an expanded knowledge of people. It is not uncommon for young children to feel that their thoughts are known by adults and that unpleasant chance events are "punishment" for their wrong-doing. This sense of someone else watching one's thoughts is part of developing a conscience. As children grow and mature, they begin to understand the place of ethics in human relationships and are able to construct a more complex set of values which sets their ideas of right and wrong in the context of their own social world.

ADOLESCENCE puberty to 18-21 years

Adolescence is the period of transition from childhood to adulthood. Changes characteristic of this period are related to an increase in the body's hormone activity, and while they usually follow a definite sequence, their rate and magnitude vary from person to person. Thus, the concept of developmental maturity is more relevant than chronological age in assessing adolescent growth and development. It is also important to keep in mind that growth potential during adolescence is determined both by inherited genetic factors and by nutrition and health in earlier years. In general, two trends have been noticed in the pattern of child growth and development in the United States: at all ages, young people today show a size increase over children in the past; and children reach physical maturity at an earlier age. Thus we can expect children to be taller and heavier than their parents, and to mature more quickly.

PHYSICAL DEVELOPMENT

A number of changes occur as the child's body develops into that of an adult. The most dramatic of these changes takes place during puberty when the glands begin to secrete sex hormones, and height and weight rapidly increase. Each individual is genetically programmed for maturation, and during puberty these inherited genetic factors are more important than environment in determining when growth begins and its extent.

Puberty is the time when boys and girls, who up to about age ten grew at identical rates, begin to grow at different rates. Girls enter puberty and reach sexual maturity before boys, but for both boys and girls, puberty usually begins after a person has reached at least 85 percent of eventual height. It is marked by the beginning of breast development in the female and by genital changes in the male.

The typical girl in the United States begins puberty between the ages of eleven and thirteen and increases in height at a rate of about two to four inches for the next two to three years. At around thirteen years of age the average adolescent

girl begins the menstrual cycle, and her growth begins to slow until she reaches her adult height at about sixteen. Some girls begin to menstruate earlier than this average and some begin later; variability of three years in either direction is not unusual. External changes in the body such as breast development and the growth of pubic hair usually accompany the onset of menstruation; some girls, however, can evidence these visible physical changes long before they begin to menstruate, and others may begin menstruation before physical changes in their bodies are apparent.

Anticipating the onset of menstruation and explaining it to a girl before it occurs can help alleviate possible anxiety. If a girl begins menstruation well after her peers, she and her parents may become anxious. Physicians and EPSDT workers can help allay this anxiety by explaining the wide range in the normal age of sexual maturity and by assessing whether or not physical or hormonal problems may be a factor in delayed onset of menstruation.

In the average adolescent boy, the growth spurt begins between the ages of eleven and fourteen and is usually longer and more intense than in girls. A boy may grow at a rate of three to five inches and will almost double in weight between the ages of twelve and sixteen. Sometime after the onset of puberty, sexual development in boys may be accompanied by emission or ejaculation of semen during sleep. These ejaculations may be accompanied by sexual dreams. If boys do not know that this is normal, they may worry unnecessarily about it. Parents should realize that a boy may be somewhat shy about his developing sexuality. If, however, the subject is talked about openly and without embarassment, the boy can raise a number of concerns which a parent can help relieve.

Adolescence is a time when sex differences become increasingly obvious, and curiosity about the opposite sex grows with the young person's own sexual maturation. The crystalization of a sexual identity which has been evolving since early childhood can raise a number of questions about personal identity and relationships with people of the opposite sex. It is often a difficult time for the young person who, though not quite an adult but no longer a child, must come to terms with many changes during a short period of time.

ISSUES FACED DURING ADOLESCENCE

Emancipation from parents and other adults.

Adolescents begin to examine parents and other adults more critically and tend to rely more on friends of their own age. This may show up either in a greater detachment and distance from parents or in more frequent arguments with them.

Increasing intellectual growth.

Adolescence is a time of increased ability to conceptualize and develop abstract thoughts. The increasing demands of both school and social life help adolescents expand their mental abilities. Questions of personal identity, purpose, goals, and values become important and may occupy much of an adolescent's private thoughts. An increased concern with the social world, attempts to understand society, and involvement in social causes, and political issues, may also characterize the adolescent years.

Relationships with peers provide a social niche between childhood and adulthood during which time an adolescent or youth subculture may develop.

Adolescence is a time when the differences between generations become an issue. Our society has few formal means for recognizing this stage in life, and youth are seldom integrated into the economic or political life of the community, despite their physical and mental development. Thus, physical maturity may be accompanied by lack of a place in the social scheme of things. In the face of this, youth themselves may develop a subcultural world which is uniquely their own. They have put aside childhood, but adult responsibilities cannot yet be assumed; therefore, peer groups may become the center of an adolescent's world and are powerful determinants of social acceptability and personal self esteem. This is a time of cliques and special friendships, of secret bonds and pacts, or special in-

signia and special music, dance, language, and dress. Youth may live a large part of their lives in this subculture world which rejects and excludes adults who may find it hard to understand and accept this expression of a young person's growing independence.

Empathy with other people and the practice of reciprocity, giving and sharing, in personal relationships paves the way for responsible interactions with others.

The growing responsibilities faced by youth require an increased awareness of others, their needs and desires. As adolescents develop into adults, they learn to curb personal desires and modify personal aspirations in ways which allow the formation of more meaningful social relationships.

Increasing sexual activity leads to the development of sexual relationships.

In adolescence, the impetus of heightened sexual drives leads to an increasing interest in sexual relationships. People of the opposite sex who were ignored or even disdained during childhood become more central in the adolescent's social life. Curiosity and awareness about the opposite sex may also be accompanied by curiosity and interest in the bodies of same-sex friends. Sexual exploration among same-sex friends as well as between sexes is not uncommon during this time.

Education is focused on the achievement of skills for future independence but conflicts can arise if it prolongs dependency.

One of the paradoxes of growing up in modern industrial society is that maturation comes earlier but education takes longer. This in itself would not be a problem if educational institutions recognized the adolescent's capacity for self-direction and self-motivation. In many cases, however, they do not do so, and adolescents may reject the offerings of educational institutions as irrelevant to their aspirations or to the world which they see around them.

SECTION III

USE OF MEDICAL SERVICES

Many EPSDT clients do not have an ongoing relationship with a provider of primary health care. They have been using walk-in clinics or hospital emergency rooms, and then only for severe health problems. EPSDT is designed to help clients change this pattern by encouraging them to focus their use of health care services on building a relationship with a health care provider who will be willing to be the family's major source of medical service and advice. This relationship will allow the health care provider and the family to get to know each other and will encourage the maintenance of up-to-date medical records, ensuring rapid diagnosis and treatment of health problems.

Encouraging clients to use the health care system in this way may be difficult because the EPSDT client population has not been oriented toward habitual health care utilization. Some EPSDT clients may obtain health care advice from friends, family, or other advisers. EPSDT workers should find out from clients where they obtain advice about health care, and if a client of EPSDT uses non-medical advice, that client should be encouraged to talk with a doctor or a trained health worker in order to obtain additional information and care.

SEEKING MEDICAL ADVICE

Parents are likely to have a number of questions about their child. They should view physicians, dentists, and health workers as their partners in working to ensure the health of the child. These health service resources can be helpful by answering medical questions and dealing with health problems. Health services must be utilized, however, if they are to be effective. If families can learn to rely on the EPSDT worker for referrals to a good physician or dentist and for assistance in obtaining needed medical care, they are more likely to use health services.

Parents of infants and young children are especially likely to need the advice and reassurance of a physician or health

worker. Doctors expect questions from parents, and parents should be encouraged to keep in touch with them. If parents do not want to bother the physician unnecessarily, EPSDT workers should reassure them that it is all right to call their doctor, and should help familiarize them with the physician's "call hours" and procedures. Parents should know that their call may be received by a nurse or health aide who is trained to take information over the phone. If for any reason a parent feels that a doctor or health worker has not been receptive or has not provided adequate information, advice, or service, the EPSDT worker should be called in to help resolve the problem or misunderstanding.

GUIDELINES FOR ESTABLISHING A GOOD RELATIONSHIP BETWEEN PARENTS AND THEIR CHILD'S DOCTOR

- It is better to call a doctor or clinic during office hours. This allows the doctor to look over the child's record and add any new information.
- Doctors would rather know about possible trouble early in the child's development. If parents suspect that something is wrong, they should not hesitate to tell the physician.
- Parents should keep the doctor's phone number by their own telephone where they can easily find it. If a doctor is called, the parents should make the call themselves, especially if younger children are involved.
- Parents should learn how to take the child's temperature and tell the doctor what it is. Parents should also learn to be good observers and report what they observe to the doctor.
- A doctor cannot do too much over the phone. While talking to the doctor may be reassuring and convenient, a visit to the doctor's office may be needed. Parents should not hesitate to take their child to the doctor if this is called for.

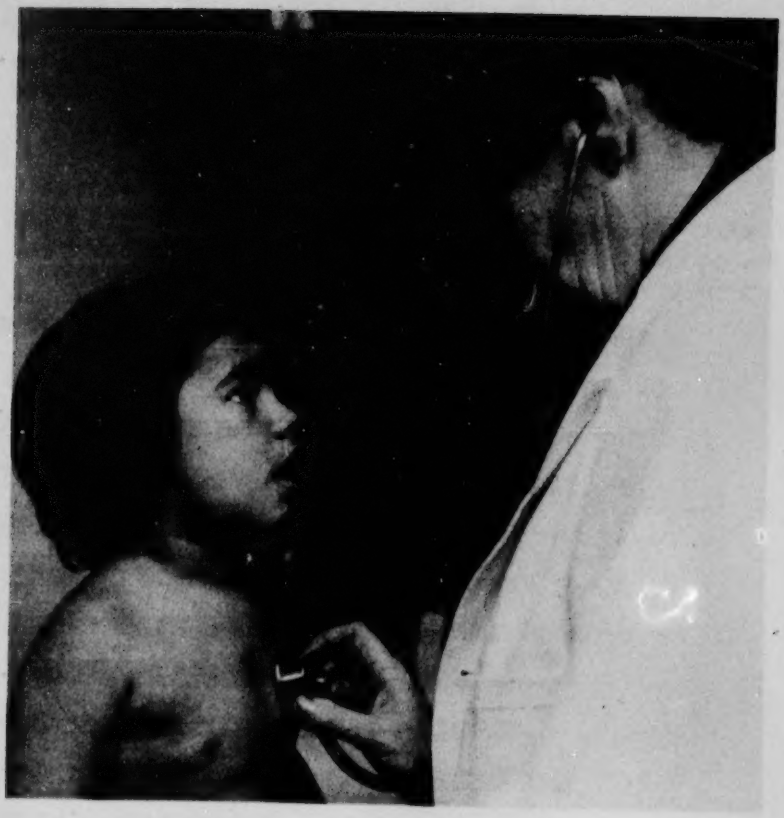
SECTION IV

SELECTED HEALTH PROBLEMS*

Some of the health problems which EPSDT clients are likely to have and about which EPSDT workers may want information are described here. The following health problems are included:

- Anemia
- Child Abuse
- Dental Health
- Diabetes
- Hearing and Speech
- High Blood Pressure
- Immunization
- Lead Poisoning
- Malnutrition
- Obesity
- Parasites
- Rheumatic Fever
- Sickle Cell Conditions
- Skin Problems
- Substance Abuse
- Tuberculosis
- Venereal Disease
- Vision

*Much of the discussion of health problems presented here has been adapted from the booklet *Sickness and Poverty: A Handbook for Community Workers* by John T. Tierney, U.S. Department of Health, Education and Welfare, Public Health publication No. 2047, U.S. Government Printing Office, Washington, D.C., 1970.



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ANEMIA (Iron Deficiency)

Anemia is a condition in which the total number of circulating red blood cells is below normal or the individual cells do not have enough hemoglobin. Hemoglobin is a substance found in the red blood cells which absorbs oxygen from the lungs and releases it to the rest of the body. In severe iron deficiency anemia the red cells are smaller than normal, and each cell contains a smaller than normal amount of hemoglobin. The main cause of iron deficiency anemia in infants is inadequate iron in their food. Iron deficiency anemia can also develop due to blood loss or because the body has trouble absorbing iron from ingested food. This may be the result of chronic diarrhea or intestinal disease.

Treatment: Iron deficiency can be corrected by increasing the intake of foods which contain iron or by taking iron pills, but the most important part of treatment is to discover and correct the underlying cause of the deficiency.

CHILD ABUSE

Child abuse is the willful injury of a child by parents or other caretaking adults. The problem is serious for both the child and the parents. Abusive methods include malnutrition, physical neglect, and violence, which sometimes leads to permanent crippling or death. While medical personnel are trained to recognize battered children, abused children, and maltreatment, accurate data on the amount of child abuse is limited because only a small proportion of maltreated children are taken to a hospital or a physician. Injuries may be explained away as the result of a fall or accident. Most child abuse cases occur in children under three years of age and the death rate from child abuse is substantially higher in children under two years. In many cases, only one child in the family is the regular target for assault.

Child abuse exists in all levels of society, but people at the lower end of the economic scale may be reported more frequently to legal authorities. Child abuse is usually not a planned or premeditated act. Many abusive parents themselves appear to have been victims of child abuse. Some have a history of mental illness and institutionalization. The individual incident of abuse is related more to the abuser's emotional state at the time than to any provocative behavior by the child. The abuse to the child is frequently part of an explosive emotional reaction by a parent and may be triggered by an irrelevant cause. Loneliness and social isolation of the parent seem to contribute to this problem.

Treatment: The overriding consideration in the treatment of child abuse is protection of the child. In cases where the abuse is obvious and the parents deny assaulting the child, immediate court action to remove the child from the home may be called for to avoid a repeat of the incident. If no clear danger exists, the child should remain with the parents and intensive casework should be provided by an experienced child protection worker. Intervention by the court, supervision by probation officers, and counseling or psychiatric care for parents may be required.

Implications for the EPSDT worker: It may be hard to believe that a parent could intentionally harm his or her own child to such an extent that medical care is required or that death results. Yet, "the battered child syndrome" is an emerging medical problem of considerable proportions. In addition, an increasing number of cases are being recognized where children have been sexually abused.

An EPSDT worker who observes evidence of brutality to children could prevent a child from becoming crippled or killed by taking appropriate steps. A useful technique in differentiating child

abuse from an accident is to ask each parent separately how the child became injured. In cases of child abuse, the two descriptions are less likely to agree. Especially when there is a history of similar injuries, such discrepency between parents' stories may indicate child abuse. Severe bruises and broken bones which reoccur at different times also suggest child abuse. People in an abusive home may remain silent and not incriminate each other. Because the victim of child abuse is young, he or she may not be able to describe what happened. Older children may be afraid of implicating their parents. The non-abusive parent may also remain silent to protect the abusive parent or out of fear.

Most states require reporting of child abuse. Reporting of suspected abuse and quick action by authorities can save a child from further injury. Failure to conduct a thorough investigation of suspected abuse and failure to intervene when these suspicions are substantiated can pave the way for further abuse which might result in the permanent crippling or death of a child. At the same time, EPSDT workers should not act on cases of suspected child abuse by themselves. There are a number of complicated legal issues and procedures which must be attended to in cases of suspected child abuse. This is a problem which should be handled by child protection workers who are specially trained to assess and deal with child abuse. The EPSDT worker should report suspected child abuse without delay to his or her supervisor or should follow the established procedures of the agency for dealing with suspected child abuse.

DENTAL HEALTH

Occurence: Many people do not think of dental diseases in the same way they think of physical diseases, but dental diseases are the most widespread of all human ailments. More than 95 percent of the American people are affected by dental disease. Tooth decay is by far the most prevalent form of dental disease in the young. Gum diseases also begin to appear during the early teens and progress as one gets older. The average 16-year-old has seven decayed, missing, or filled teeth. Once tooth decay begins it will not "clear up" with time and bed rest, as do many other kinds of diseases. Tooth decay must be treated or it will progress to the point where loss of the tooth or serious infection occurs.

Dental Development: Primary, or "baby teeth," are very important. They perform four basic functions. They:

- help in chewing food, and thereby contribute to digestion
- contribute to facial development and expression
- preserve space for incoming permanent teeth
- make up part of a child's speech equipment

A baby's first tooth may be expected at approximately six months of age. It will be the first of 20 primary teeth appearing during the child's first 24 months. Since some of these primary teeth will remain in the mouth until the child is approximately 12 years old, parents should begin caring for an infant's primary teeth as soon as they appear. As the child grows he or she should be guided in routine dental care.

Permanent Teeth: The first permanent teeth are sometimes called the "six-year" molars, because they appear at about age six. Because they do not replace any of the primary teeth, parents often think they are temporary. This error can have unfortunate consequences. They *are* permanent and will not be replaced if lost.

The permanent front teeth also appear at about age six. From this time until all the primary teeth are lost, usually at about 12 years of age, the mouth is in a state of developmental change and should receive regular care and professional supervision from a dentist.

Dental Health Habits: Good dental health requires a partnership between the family and the dentist. The family's job is to make sure each member follows the rules of good dental care. The dentist is responsible for finding and correcting dental problems.

Early in a child's training parents should begin to teach the principles of proper tooth brushing and mouth rinsing. Eating a well-

balanced diet is important for over-all health, but what the child doesn't eat is more important for good dental health. That is, the child should not eat sweets. If good dental habits are learned during childhood, they tend to last throughout life. Therefore, proper oral hygiene habits should be taught along with the skills of feeding, washing, and dressing.

Professional dental visits should begin at about age two, when all "baby teeth" are in, and certainly by age three.

Tooth Decay: Tooth decay is the most prevelant dental disease. It starts early in life and, without treatment, can lead to loss of permanent teeth. Of people 45 to 54 years of age, 20 percent have no teeth at all, and among people over 65, 50 percent have lost all of their teeth. Many factors influence the development of tooth decay. These include snacking habits, particularly the amounts of sweets eaten; existence of a sticky film on the teeth in which acid-producing bacteria live; the amount of fluoride in the drinking water; the extent of personal attention to dental hygiene; and the frequency of professional dental care.

Current knowledge indicates that tooth decay is the result of the fermentation of sugars and starches. The weak acid produced by this process attacks the tooth enamel and dissolves it. Decay of tooth enamel is most likely in the pits and grooves on the chewing surfaces of the back teeth and on those areas that are next to other teeth. Decayed teeth may be sensitive to heat, cold, or touch and, as the destruction goes deeper into the vital area of the tooth, there may be pain. Treatment of tooth decay includes removal of the decayed area and filling the cavity to restore the tooth. If decay is left untreated, it will spread and lead to the loss of the tooth.

Gum Disease: Gum disease is rarely visible in the healthy child but is more likely to appear as a child enters the teens. It is the principal reason for tooth loss in an adult. Symptoms of gum disease are swelling, bleeding, and redness of the gums. Most authorities agree the inflammation of the gums is a result of local irritants such as collected food debris, and bacteria. If the condition is not treated, the irritants can cause the supporting structures of the teeth to become infected. The teeth literally fall out because there is no gum or bone to hold them.

Treatment of gum disease consists of eliminating the offending agents. This entails removal of hard deposits, debris, and impacted food, and treating the mouth infection. Prevention consists of early detection and removal of gum irritants. Good brushing, use of dental floss after every meal, and routine professional dental care can prevent gum disease.

Bite Problems: Bite problems are present in approximately 75 percent of all children between the ages of 12 and 18. In three to five

percent of these children, the problem is so bad that it is considered a facial deformity. Although heredity plays a part in bite problems, the condition is often a result of the crowding or shifting of teeth due to premature loss of baby teeth that prevents permanent teeth from coming into position correctly. These problems can be prevented by maintaining the position of teeth, timely extraction of primary teeth to permit correct positioning of secondary teeth, correction of underlying emotional disturbance which might cause thumb sucking, and the elimination of mouth breathing by removal of nasal obstructions and by exercises of the lips. Once bite problems occur they can be corrected by realignment of the teeth through braces or extraction.

Fluoride Treatment: The fluoride content of the public water supply can be adjusted so as to reduce tooth decay substantially. Children benefit more than any other age group from community water fluoridation.

While fluoridating the water supply is the most effective way to provide fluoride treatment, fluoride may also be applied directly to the teeth of children aged 13 and under. This can be done by the dentist or his or her assistant during the course of a regular dental visit.

Parents should also be aware that use of toothpastes with fluoride in them has been shown to reduce tooth decay somewhat. Fluoride mouth rinses may aid in reducing tooth decay as well. The dentist should be asked for his or her recommendation on fluoride mouth rinses for children.

Implications for the EPSDT Worker: Dental health is an essential part of over-all good health. Teeth are necessary for adequate nutrition, pleasing personal appearance, adequate psychological self-image, and effective speech. Good dental health can be maintained by thorough brushing and flossing of the teeth after every meal and routine professional care from a dentist regularly. Children should begin routine visits to the dentist between their second and third birthdays and should establish a pattern of care promoting a positive attitude towards dental health. The EPSDT worker can help people use dental services effectively by arranging for transportation, and by helping with health education, and the reinforcement of good dental hygiene.

DIABETES MELLITUS

Diabetes is a disorder of the carbohydrate metabolism characterized by too much sugar in the blood and urine, and a disturbance in the ability to produce insulin.

Diabetes may develop at any age. Almost 2.5 million Americans have it and about 120,000 are under 21. Over one-half of the people who have diabetes do not realize it.

Symptoms: In children, the onset of diabetes is accompanied by frequent thirst, urination, and an increase in appetite. The child may also begin to wet his or her bed. Simple blood sugar and urine tests may show elevated blood sugar levels.

Treatment: Diet control, insulin, and exercise are crucial. Emotional difficulties may accompany the need for close supervision of young children and can complicate matters. Diabetic children who are beginning school at around age six or entering adolescence at around age thirteen face particularly difficult emotional and physical problems.

Implications for the EPSDT Worker: While many people feel that diabetes is a "controlled" disease, there are many problems involved in monitoring the diet and activity of a diabetic child. Small group therapy and camps designed especially for diabetics can be particularly helpful for children with this disease. Close contact with and trust in the physician is also imperative. Children and their families should be encouraged to discuss this condition fully with their physician.

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HEARING AND SPEECH PROBLEMS

Hearing problems make it difficult for a person to understand what other people say. They also make it difficult for a person to hear his or her own voice and, thus, to form words others can understand. As many as ten million people in the United States have a speech or hearing difficulty; four million are children. Hearing loss can result from birth defects, accidents, disease, or prolonged exposure to loud noise.

Hearing problems are associated with earache, running ears, childhood diseases including measles, mumps, scarlet fever, chicken pox, whooping cough, meningitis, and large adenoids. A person who is having trouble hearing may look puzzled when spoken to and may ask others to repeat what they have said. The hard of hearing may shout or speak louder than normal because they can not hear how loud they are speaking. Children with undetected hearing problems are likely to fall behind in school.

Speech problems can occur in the wake of hearing loss but also stem from disorders in the part of the brain controlling language. This can occur after an accident or injury. Structural disorders such as misaligned teeth, irregular tongue or mouth definition, or lack of muscle control may lead to impaired speech. Some people may have learning disorders which get in the way of speech while others may have emotional problems which are reflected in speech patterns.

Prevention and treatment of speech and hearing problems begin with good prenatal care. Expectant mothers should be protected from German measles and the indiscriminate use of drugs. Children should be immunized against diseases which can affect hearing, and should be treated for upper respiratory illness. Head injuries and long exposure to loud noise should be avoided. Surgery, hearing aids, and speech and hearing training are available and can be quite effective. The EPSDT program provides hearing aids and special speech and hearing therapy when needed. While more than half of the children found to have hearing or speech problems can be effectively treated, it is important for them to receive treatment early, since the success rate decreases as children get older. Persons who have had a hearing problem for a long time may become discouraged; if they give up, and no longer try to listen, it becomes harder for them to adjust to corrective therapy.

Implications for the EPSDT Worker: Hearing loss can seriously limit a person's ability to avoid danger, to communicate with others, and to do well in school. Constantly afraid of the embarrassment that might be caused by missing or misunderstanding a comment in conversation, the person with a hearing disability may withdraw from

others and avoid social contact. Since most hearing losses occur gradually, the beginning of the problem can go unnoticed and help will not be sought until the problem is severe. EPSDT workers can work together with the speech and hearing impaired to help them recognize their problem and obtain help for it. It is important to realize that emotional difficulties are often connected with deafness, but even when there are no emotional problems, children with hearing difficulty may be mistakenly thought retarded because of their limited responses to the world.

HIGH BLOOD PRESSURE (Hypertension)

Hypertension is a disease characterized by the elevation of arterial blood pressure. The two main classifications are primary and secondary. The cause of primary, or essential, hypertension is unknown. Secondary hypertension is a condition in which the elevated blood pressure is related to a known cause. Children who have hypertension usually have this secondary form. Primary hypertension may progress and involve the heart, blood vessels, kidneys, and brain. This involvement is called hypertensive cardiovascular disease. In most cases the progression is very slow, and the individual has no symptoms or only mild symptoms for many years. In a relatively small number of patients the onset of the disease is abrupt, followed rapidly by severe symptoms and complications.

Cause: The cause of primary hypertension is obscure. Heredity, changes in salt and water metabolism, disturbances of kidney function, emotional stress, diabetes, and overweight have all been implicated as contributing to this disease.

Occurrence: Hypertension is the most commonly encountered form of cardiovascular disease. An estimated 17 million Americans between the ages of 18 and 79 have hypertension. About 10.5 million adults have hypertensive heart disease. Hypertension is estimated to exist in 15.3 percent of the adult population. Up to age 50, men are found to be more susceptible to hypertension. After age 50, the disease is more common in women. At all ages, the rate of hypertension among Negro adults is twice that among white adults.

Because the condition is frequently present for many years without symptoms other than elevated blood pressure, people often do not know that they have this disease. Patients who do show symptoms may complain of dizziness, fatigue, insomnia, headache, and nervousness. The heart may enlarge and the patient may develop congestive heart failure. Hemorrhage of the tiny arteries in the retina may cause visual disturbances or blindness.

Prevention and Treatment: People with a family history of hypertension may help to forestall the development of symptoms by controlling weight, avoiding emotional stress, reducing salt intake, and improving health habits, e.g., getting plenty of sleep, rest, and relaxation. It is important to detect and control hypertension at an early age since this disease tends to be more damaging over time. Although they may show no symptoms, children should have their blood pressure checked routinely.

While there is no known cure for primary hypertension, there are many forms of treatment available that can lower the blood

pressure and prevent or delay complications. Drugs and diet are most commonly used to reduce blood pressure.

Implications for the EPSDT Worker: It is believed that the personality of the patient is one important factor in the development of primary hypertension. While there is no agreement on a specific personality pattern, it is recognized that these patients frequently are anxious and tense. Helping the patient to understand this condition, modify his or her mode of living, and, if possible, change some characteristic emotional reactions may help to halt the progress of this disease.

Because patient cooperation is necessary to control this disease, patients should be informed of their problem and supported in their efforts to establish a regimen of treatment. The EPSDT worker can help in this effort. Awareness of the possibility of high blood pressure is a first step towards early detection. Children can be encouraged to know their blood pressure just as they know their height and weight.

IMMUNIZATION

Immunization occurs when a small amount of a disease introduced into a person's body stimulates the body to build defenses against it. These defenses protect the body from future infection by that disease. Some immunizations take more than one inoculation. All babies should receive protective immunizations, which start at about two or three months of age, and continue with booster shots into adult life.

There are seven major diseases for which a child should be immunized. They are:

Diphtheria

Whooping Cough (Pertussis)

Lockjaw (Tetanus)

Polio

German Measles (Rubella)

Measles (Rubeola)

Mumps

DTP: diphtheria, tetanus, and pertusis: Each of these diseases is serious and a child should be protected from them early in life A single series of injections can protect a person against these three diseases.

Polio: Polio can reduce a child to a lifelong cripple. Modern medicine now has two effective defenses against this disease. The usual defense is an oral vaccine, although injections are sometimes used. Children and adults alike should be sure to protect themselves against polio.

German Measles: Three-day or German measles can cause serious birth defects in children whose mothers contracted the disease during pregnancy. In order to reduce the chance of infecting a pregnant woman, children between the ages of one and eleven should be immunized against this disease.

Measles (rubeola): Measles is an explosive and contagious childhood disease. It can cause mental retardation, blindness, or deafness. Babies can and should be protected against this disease at one year of age.

Mumps: A single dose of vaccine can give lifelong protection against mumps. All people over one year of age who have not had mumps should be protected against it.

Smallpox: While a smallpox vaccine is not part of the basic series of immunizations, protection against this disease may be recommended by the physician.

Booster shots: Preschool children should receive followup shots to insure continued protection against diphtheria, pertussis, tetanus, and polio.

Implications for the EPSDT Worker: EPSDT workers should encourage parents to keep their own accurate immunization record for each child and to remember to obtain needed booster shots for their child's protection. It is a good idea to send parents follow-up reminders about needed booster shots for their children and provide assistance to make sure that needed inoculations are obtained. This is an essential part of good case management.

LEAD POISONING

Lead poisoning is a disease caused by accumulation of lead in the body and results in damage to the nervous system. The degree of damage is related to the increased amount and duration of exposure to lead, nutritional factors, and age.

The major cause of increased lead absorption is the consumption of paint or plaster containing lead. Lead in dust and dirt is ingested through normal hand-to-mouth activity. Children left for long periods of time in their rooms or cribs, with no stimulation, may occupy themselves by biting on windowsills, eating peeling paint from walls or ceilings, or gouging the wall and eating the plaster.

It is believed by health authorities that increased lead absorption affects up to 600,000 children a year in the United States. It is a cause of mental retardation, neurological impairment, and death. The recognized incidence of undue lead absorption is increasing and studies indicate that children one through five years of age are at high risk, although older children also get the disease.

Undue lead absorption is a recurrent disease which cannot be eliminated unless the living environment is changed. Until the 1950's, lead-based paint was frequently used on the interior and exterior of houses. Areas where old and deteriorated houses exist are high-risk areas for lead poisoning. Many dwellings in these areas have several coats of lead-based paint on the walls, woodwork, and window-sills; lead may also be a component of the plaster. All children under the age of six living in such older buildings are at high risk.

Undue lead absorption is often without marked symptoms. There may be nonspecific symptoms in children, such as stomach pain, constipation, vomiting, irritability, and twitching, but unless the physician suspects undue lead absorption, it will be not diagnosed. The only sure way of detecting the disease is to test the child.

Prevention: This can be accomplished by early detection of the disease and correction of the environment. Laws have been passed which prohibit the use of lead in paint for the home. The potential problem, however, persists in older homes even when old paint has been covered over.

Treatment: If a child is identified with undue lead absorption, drug therapy designed to reduce the abnormally high concentration of lead in the child's body may be administered. It is extremely important that the child be protected from further lead

exposure through removal of lead paint hazards in and around the house.

Implications for the EPSDT Worker: Once undue lead absorption is detected, it takes aggressive and sustained activity to correct the problem. An agency in the community (e.g., public health department, building department, etc.) can provide services to determine the source of lead and can give advice and assist in eliminating the lead hazards. In all cases, the most probable sources of lead for the child must be eliminated and the child must be kept under pediatric care.

MALNUTRITION AND HUNGER

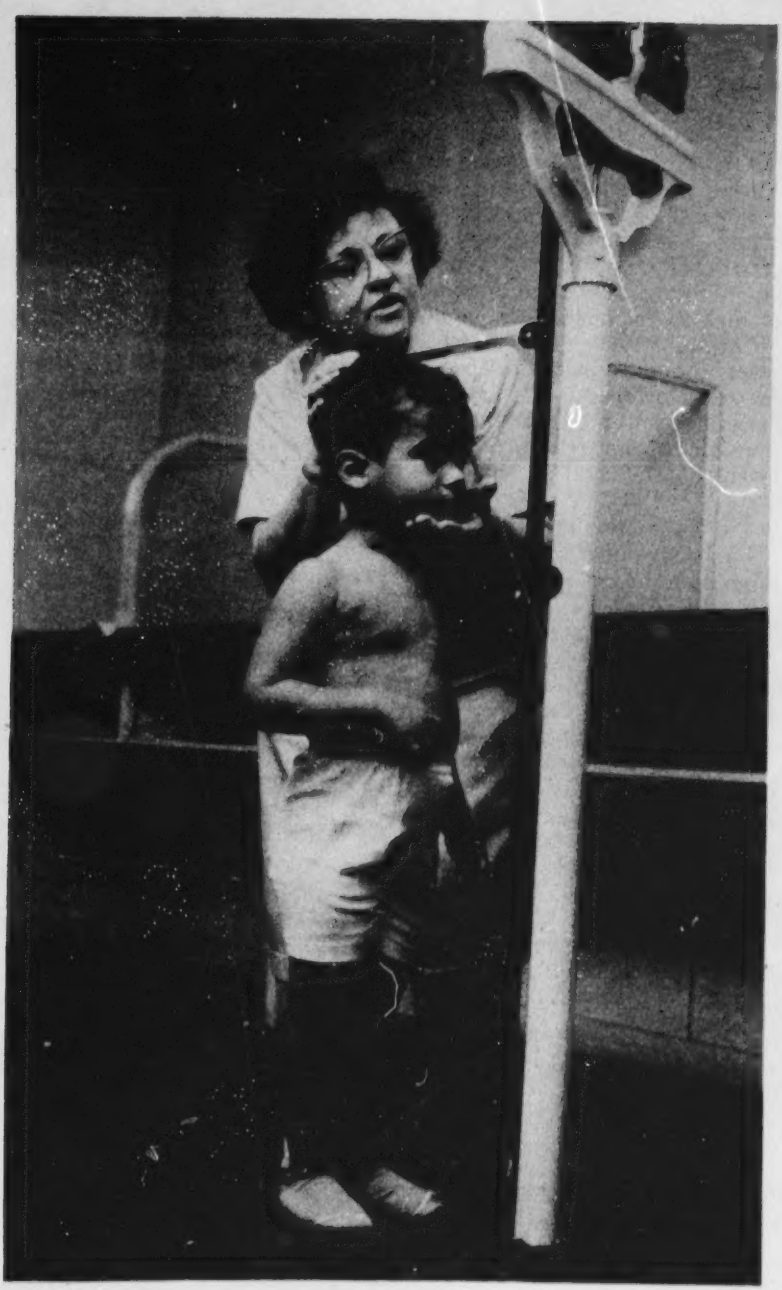
Hunger is the feeling that results from an individual's lack of food *at a particular time;* malnutrition is an impairment or risk of impairment to physical and mental health due to failure to meet nutritional requirements *over time.* Chronic hunger is caused by failure to consume an adequate amount of food. Malnutrition is the result of either the consumption of an insufficient quantity of food or of failure to obtain enough of one or more essential nutrients. This condition may be caused by not eating enough nutritious food or by faulty absorption or utilization of nutrients from the food a person does eat.

Effects of malnutrition are retardation in mental and physical growth, lowered resistance to disease and infection, apathy, listlessness, loss of energy, inability to concentrate, slowness of comprehension, inattention, restlessness, behavioral problems, or slow learning.

Treatment: This consists of a diet supplying an adequate quantity and balance of food. Sometimes therapeutic dosages of nutrients such as iron and vitamins are also provided.

Implications for the EPSDT Worker: A number of specific health problems are associated with hunger and malnutrition. Among these are marasmus (caloric starvation) and kwashiorkor (protein starvation), iron deficiency anemia (nutritional anemia), rickets, goiter, beri beri, and pellagra.

Pregnant women, infants, pre-school children, and adolescents are especially susceptible to malnutrition, and special care should be taken to discover and correct their nutritional problems. If EPSDT workers discover families with nutritional problems, they should inform social services workers and ensure that the family, if eligible, knows about and is taking part in the federal food stamp program. The family should also be informed about the U.S. Department of Agriculture's Women, Infant and Children Nutrition Program, and should receive information about diet, shopping, and meal planning.



OBESITY*

Obesity is a bodily condition in which there is an excess of fat in relation to other body components. In general, an individual who is 20 percent or more over normal weight is considered obese. While obesity is a more common condition in middle life, it is often due to eating habits established during childhood.

Obesity which develops in childhood tends to continue to plague the individual throughout life. Unfortunately, neither the obese child nor the parents usually becomes sufficiently concerned about weight until well into the child's puberty, when weight reduction is much more difficult. While fat infants and plump children may appear delightful to their parents, the chances are four out of five that the overweight child will become an overweight teenager and, later on, an overweight adult. One-tenth to one-fourth of the adolescents in this country are overweight.

Adolescent girls feel negatively about increased weight but adolescent boys tend to view increasing weight positively as a sign of growing strength. Social pressures on young girls which place a premium on being slender are often so great that previously thin girls may imagine themselves doomed to obesity unless they diet rigorously. These girls consititute a large portion of the American youth who, despite access to proper food, exist on the edge of malnutrition because of ill-advised attempts to lose weight. Ironically, the diets of overweight girls, whose caloric intake may even be excessive, are also frequently inadequate nutritionally.

Obesity is highly correlated with high blood pressure, heart disease, diabetes, and other health problems. Since it is very difficult to overcome in adolescence when a person's whole physiology and psychology are oriented toward growth, obesity is best averted by early diagnosis and treatment.

Prevention and Treatment: A nutritious diet and regular exercise habits can help prevent obesity in children and adolescents. In establishing a diet, the nutritional adequacy of the amount and type of food eaten is crucial. Under ordinary circumstances the rate of weight loss should not exceed two pounds per week. Drugs, formula diets, and fads involving food or exercise can result in short-term weight losses, but over a long period, these generally prove ineffective with the patient returning to the original weight.

While obesity is definitely a health risk factor, most people who try to lose weight are more interested in the immediate gains from

*Much of this discussion is adapted from the booklet *How Children Grow*, U.S. Department of Health, Education and Welfare, DHEW publication no. (NIH)72-166, stock number 1740-0329, 1972.

weight control of improved personal appearance, social acceptance, physical fitness, and a feeling of well-being.

Implications for the EPSDT Worker: Weight reduction may be very difficult and frustrating for the patient. The EPSDT worker can help by encouraging the patient to discuss the anxieties and stresses that provoke overeating. Reassurance, support, and emphasis on the goals agreed on by the therapist and patient are important techniques in working with the obese individual.

The EPSDT worker should understand some basic facts not commonly known to the layman about establishing a balance between food intake and energy output. It is not true that exercise burns up very few calories and that an increase in appetite automatically follows an increase in exercise. In fact, exercise is both an aid to weight loss and an appetite regulator. It is not true that a person will eat less food if he or she cuts back physical activity. In fact, physical activity helps a person maintain a reasonable diet. One should organize his or her life so that some form of exercise is an integral part of daily living. Nutritional counseling along with an explanation of the relationship between exercise, calorie intake, and weight should be provided to parents and their children. If the school offers special physical education classes for the obese child, EPSDT services should be coordinated with them.

LICE (Pediculosis)

Infestation of the scalp, other hairy parts of the body, or of clothing with lice is common among school children. Lice are transmitted by direct contact with infected persons or their personal belongings, particularly clothing and bedding. Outbreaks are worldwide and not limited to any geographic area. There is a higher frequency of lice infestation in areas of poor housing, inadequate sanitation, and socio-economic deprivation.

Symptoms of lice include inflammation of the skin, itching, white eggs (nits) on hair.

Prevention: The problem can be alleviated by maintaining a high level of personal hygiene and by laundering clothing and bedding. When necessary, there should be direct inspection of scalps, especially in schools, institutions, and summer camps.

Treatment consists of dusting the body and clothing with louse poison.

Implications for the EPSDT Worker: Upon discovery of pediculosis, there should be aggressive followup, with immediate examination of other members of the household. Although this is not a disease which requires official action by public health departments, local health and school authorities should be notified of cases of lice. Local health department personnel can be of assistance in treatment and followup of infected patients and families.

PINWORM

Pinworms are the most common intestinal parasites in humans. While pinworms are most common in sub-tropical climates, they also occur in cooler climates.

Symptoms are usually confined to the rectal area although females may have symptoms around the vagina. Symptoms usually consist of an itching or rash. Sometimes there may be restlessness at night. Some children grind their teeth in their sleep when they have pinworm infection. Pinworms are very contagious and can be spread on clothing, bedding, by direct contact or by putting hands or other contaminated objects in the mouth. Despite popular belief they are not transmitted by household pets such as dogs and cats.

Treatment consists of taking a medication specifically developed to eliminate this parasite. The house should be given an

especially good cleaning on the day that the medicine is taken. The child's hands and toys should be scrubbed after treatment since they might harbor the parasite's eggs.

Implications for the EPSDT Worker: The EPSDT worker should try to reduce any shame or stigma which a parent or child might feel. Further, the worker should emphasize the importance of cleaning and hygiene after treatment.

RHEUMATIC FEVER

Rheumatic fever begins with a streptococcal infection, can spread through a person's body, and results frequently in rheumatic heart disease.

Although the precise cause of rheumatic fever is unknown, it is generally believed to be the result of a previous infection. Poverty, overcrowding, malnutrition, dampness, and poor housing predispose children to this kind of infection, and therefore to rheumatic fever. The disease is more common in cities than in rural areas and has a tendency to run in families.

Rheumatic fever is most prevalent in the Rocky Mountain region, New England, and the north and central states. Its occurrence is lowest in the south and southwest. The onset, seasonal in nature, is at its high during late winter and early spring, and at its low during summer and early fall. While all ages are susceptible, this disease rarely occurs in children under five years of age. It is most common in children six to twelve years old, and is a significant cause of death for children six to ten years of age.

Prevention: Rheumatic fever can be prevented by early diagnosis and adequate therapy for all infections caused by streptococcal germs. Prevention is the best weapon against this disease. Streptococcal diseases can be identified by laboratory evaluation of throat cultures and can be treated with antibiotics. For patients known to have had earlier bouts with rheumatic fever, emphasis is placed on the prevention of streptococcal infections by long-term penicillin treatment. Routine laboratory tests and cultures are urged whenever streptococcal infection is suspected.

Treatment: During the acute phase of rheumatic fever, the patient will probably be hospitalized. Depending on the intensity of the illness, the child may require bed rest for from two weeks to well beyond six months. During this period, the patient requires good medical and nursing supervision, drugs, laboratory services, and good nutrition. The acute phase is followed by a long period of penicillin treatment and medical supervision.

Implications for the EPSDT Worker: Rheumatic fever, which may be a recurring disease, has serious social, emotional, and economic implications for the patient and his or her family. The many medical, nutritional, social, educational, and vocational services that may be needed require active coordination to insure maximum benefit and rehabilitation.

Convalescence should take place at home, since the patient usually does better in familiar surroundings with loved ones. A great deal of nursing care and absolute bed rest are required. Home care

may be difficult if the mother is not well, lives in inadequate housing, or has several other children to care for. In such a situation, care in another facility such as a hospital, foster home, or convalescent home is required.

When the active symptoms of rheumatic fever subside, a person may feel well and be impatient about staying in bed. It is important for parents to realize that the child must rest. They will have to devote a great deal of imagination and planning to keeping the child in bed. This becomes an increasingly difficult task when the patient no longer feels sick and wants to be up and about. The best answer is to keep the child's mind and hands busy. When possible, the services of a visiting teacher should be used so that the child can continue studies.

A number of community resources are available to the patient with rheumatic fever. Most state health departments offer medical and rehabilitative services through their crippled children's programs. Public health nurses and homemakers, teachers, medical social workers, nutritionists, and physical therapists are available in many communities to provide care for the patient at home. Local heart associations and health departments offer prophylactic penicillin either free or at reduced cost for patients requiring long-term drug therapy. For patients suffering from rheumatic heart disease, crippled children's programs pay for hospital and medical care associated with heart surgery.

SICKLE CELL

Sickle cell is a genetic condition of the red blood cells. The disease is primarily one of black people. The sickling trait is carried by six to ten percent of all black people in the United States. It appears in two forms: a mild form is called sickle cell trait and a severe form is called sickle cell anemia. Approximately one in 400 to 600 American Negroes has the anemia.

Sickle Cell Trait: Persons who carry the sickle cell trait (a usually harmless state) do not have the anemia. They are, however, able to produce offspring with sickle cell anemia. If a prospective mother and father each have this genetic trait, each of their offspring has a one-in-four chance of having the disease. Testing for sickle cell trait is done to offer parents and prospective parents information and counseling which they may need to make informed decisions about reproduction.

Sickle Cell Anemia: Sickle cell anemia is a chronic disorder of the blood characterized by red blood cells that are sickle, or crescent shaped. The signs and symptoms are fatigue, pallor, ulcers of the lower part of the leg, and yellowing of the skin. During crisis periods in the disease, there may be abdominal pain and vomiting, as well as fever and pain in the joints. A large percentage of the cases are diagnosed in infants under one year of age. Routine blood counts lead to the suspicion of the disease and to further tests. The severity of this disease varies and some people can live normal lives between crisis periods.

Prevention and Treatment: The disease cannot be cured and can be prevented only by genetic counseling. Therapy consists of intravenous fluids for pain crises, bed rest, and medication. Treatment relieves the symptoms but has no influence on the course of the disease.

Implications for the EPSDT Worker: Sickle cell anemia is an incurable disease and few of the patients who have it reach the age of 40. The EPSDT worker can be of assistance in helping the parents, spouse, or offspring care for a family member with this disease by providing support, guidance, and help in planning for the future, and by identifying community supportive services and assisting in their use.

ACNE

Acne is caused by congestion and infection of small glands and pores in the skin. It is most likely to occur among young people as they enter puberty.

Treatment of acne is developed on an individual basis and aims at the clearing up of blemishes and minimizing scarring which could occur if the skin is not cared for. In severe cases the child should be treated by a physician. Diets which exclude chocolate, sugar, nuts, fried foods, and rich foods can help. Personal hygiene, including washing affected areas three or four times a day, is recommended.

Implications for the EPSDT Worker: Acne has emotional as well as physical implications for teenagers, and the EPSDT worker should be aware that a youth with acne may have diminished self esteem and need emotional support. The EPSDT worker can advise parents and children about diet and medical care, and may suggest psychological counseling in cases where a youth is depressed because of this condition.

IMPETIGO (Pyoderma)

Pyoderma means any pus-producing sore in the skin. The most common form of pyoderma is called impetigo. This is a contagious disease, more common in children than adults, and occurs frequently in warm, moist climates.

The sores may spread from place to place on the same individual as well as spread to other people. Impetigo can usually be cured in three to five days. Scarring is not a common complication. It is necessary to treat impetigo vigorously not only to cure the unsightly sores, but also to prevent possible complications with parts of the body other than the skin. Patients with impetigo should be particularly careful to avoid contact with patients who have been recently vaccinated against smallpox.

Families having members with impetigo should begin reasonable measures within the home to prevent the unnecessary spread of this contagious disorder. Each member of the family should use separate towels and bed linens.

Treatment: The sores should be kept clean by washing with tincture of green soap and drying with paper towels. If the crusts on the sores are thick, they are removed by sponging with hydrogen peroxide. After cleansing the sores, antibiotic ointments are usually applied. Penicillin or sulfa drugs may be administered orally as well.

Implications for the EPSDT Worker: EPSDT workers can check to make sure that sanitary conditions are established and maintained. This includes instructing the parent to change the infected child's pillowcase daily and to keep the child's fingernails short and clean in order to keep the infection from spreading to other body parts.

ALCOHOLISM

Alcohol abuse causes injury to the drinker's health and can impair social or economic functioning. Alcohol abuse among youths occurs often enough to be of concern to society. Experts agree that there are probably two million pre-teen, teen-age, and young adult problem drinkers or pronounced alcoholics in the United States.

Teenagers drink because they have seen their parents drink, and they want to appear "grown up" like them. Teenagers drink "for the effect": to get high, to rebel, to numb fears about new experiences and difficult situations. They also drink as a response to social group pressure to do so.

Antisocial behaviors often occur with alcoholism among youths. While drinking is not the cause of juvenile deliquency or serious physical aggression, those who commit these acts are more likely to be heavy drinkers than those who do not.

Alcohol is an addictive drug, just as cocaine and heroin are. The drug stigma is taken off alcohol, not because it is less harmful to the addicted person than are other drugs, but because it is legal. Being drunk is overdosing on alcohol and is much the same as overdosing on any other drug.

Symptoms: There are several characteristic symptoms of the severe alcoholic. Chronic alcoholism leads to cirrhosis of the liver, a condition that progressively impairs the liver's functioning and may cause death. Alcohol consumption can make a person fat and cause malnutrition at the same time. Alcohol has no food value, but drinking can lead to weight gain when a normal diet is also eaten. The human body uses the alcohol calories for energy immediately and stores the food calories as fat. Alcohol also interferes with the body's absorption of certain vitamins and proteins. Therefore, heavy drinkers may have vitamin and protein deficiences.

At its extreme, after 10 to 20 years of drinking, alcoholism can cause death to the nerves that carry impulses from the arms and legs to the brain and back. It can make the muscles in the arms and legs flabby and cause the alcoholic to walk as if he or she may fall at any minute.

Prevention: Studies have shown that parents' attitudes toward drinking and their own drinking habits have more influence on forming the drinking habits of their children than peer pressure. Thus, prevention of alcohol abuse among the young must begin at home with parents explaining their views on alcohol use and making clear where they draw the line between safe and enjoyable alcohol consumption and overdoing it.

Recently, community organizations and school districts around

the United States have instituted alcohol education programs in the elementary and junior high school grades.

Implications for the EPSDT Worker: The EPDST worker should understand that alcohol use among adolescents can be a social as well as physical habit. Many teen groups around the nation say that abstention from drinking while in the early teens should be played up as a positive personality trait, rather than as a sanctimonious virtue. The EPSDT worker can help make non-drinking a positive action by reinforcing this attitude among the teenagers with whom he or she comes in contact.

There is also a role for the EPSDT worker in alcohol education among youth, particularly in referring teenagers to community alcohol education programs and in passing out literature published by various groups aimed at preventing teenage alcohol abuse. The EPSDT worker may also refer adolescent problem drinkers to Alateen (Alcoholics Anonymous for teenagers) or other organizations that support the teenager in his or her abstention from alcohol.

DRUG ADDICTION

Drug addiction is described by the World Health Organization as "A state of periodic or chronic intoxication detrimental to the individual and to society, produced by repeated consumption of natural or synthetic drugs." Hard narcotics such as heroin, opium, and cocaine are some of the major addictive drugs used in America. A greater number of people, however, are involved in the abuse of drugs other than hard narcotics. These include marijuana ("grass," "pot"), although there is some argument about whether or not marijuana is an addicting drug; hallucinogens, e.g., mescaline, peyote, lysergic acid (LSD, "acid"); amphetamines, e.g., dexedrine, methedrine, benzedrene ("uppers," "speed"); and barbiturates, e.g., Seconal ("downers").

Drug addiction results from desire for the drug coupled with availability and continued use of addicting drugs. Personality and emotional disorders or a social group which approves of drug use may increase the chance of addiction, especially for young people. Narcotics may seem to provide an escape from a sordid environment, disappointment, hopelessness, or fear.

Despite the psychological factors which may lead to initial use of addictive drugs, addiction is a physical not a psychological condition. The body becomes dependent on the drug. All kinds of people can and do become addicts. With the development of increasing tolerance, larger and larger doses are needed to prevent severe "withdrawal symptoms." Obtaining and using drugs replace other motivations. When the expense of acquiring drugs exceeds earning capacity, many addicts turn to crime to support their habits. As police

efforts to control narcotic traffic keep the supply limited, selling prices increase and thus add to the cost of the habit. Thus addicts are caught between an increasing need for the drug and rising costs which become unmanageably high. Addicts can either accept treatment which permits them to return to drug usage at a lower level, augment their supply of heroin with other drugs, such as barbiturates, amphetamines, and alcohol, or try to break the habit completely.

Narcotics addiction is primarily a problem in the larger metropolitan areas of the United States. The federal government estimates that 50,000 Americans are addicted to narcotics, principally heroin. The most susceptible age group is from 15 to 25, and about one-third are addicted before their 20th year. There are more male than female addicts, and the problem may be more wide-spread than statistics suggest since known addicts are chiefly the ones who come in contact with the law. Many people who can afford their habit or avoid being caught never became identified as addicts.

Symptoms: While there are no characteristic symptoms of drug addiction, the addict is often thin and malnourished and may have needle marks and scars over the veins on arms and legs. Because of light sensitivity, pupils of the eyes may be constricted, and the addict may wear sunglasses indoors. However, many chronic addicts appear normal as long as a sufficient supply of drugs is available. Addicts are not wobbly, are able to carry out skilled movements, can converse normally, and can work. Constricted pupils are not always present. If the drug supply becomes inadequate, however, withdrawal symptoms appear within 24 hours. These symptoms include weakness, restlessness, loss of appetite, and vomiting. The intensity of withdrawal symptoms is proportionate to the former dosage; in the case of an extensive user, it can be severe.

Treatment: Treatment is based on withdrawal of the drug or on sustaining a controlled level of usage. Most authorities feel this can only be done in a controlled setting such as a hospital or special treatment center. Every state and some major cities have established such specialized treatment centers. To lessen the mental and physical anguish during withdrawal the drug Methadone is sometimes given to the patient. This drug is a substitute which is given in monitored dosages to reduce withdrawal reactions. Part of hospital therapy includes psychotherapy and treatment of associated physical ailments. The shorter the duration of the addiction, the better the outlook for successful treatment. However, the rate of relapse after "cure" is high. After age 35, some addicts tend to "mature out" on their own and give up drugs.

Implications for the EPSDT Worker: The implications of teenage drug use vary with the kind and amount of usage. The EPSDT

worker should understand that drug use among adolescents can be a social as well as physical habit. Intervention with teenage drug users is sometimes directed toward the whole social group, not isolated individuals. Drug use among adolescents may be associated with delinquency, crime, and the sale of drugs. Treatment, therefore, must include coordination of a number of legal and social services with the activities of the health service program.

TUBERCULOSIS (TB)

Tuberculosis is a chronic bacterial infection which usually affects the lungs but can attack other parts of the body as well. It is contracted when a person inhales the germs which cause the disease, usually through prolonged contact with an infected individual. Tuberculosis germs can remain inactive in a person's body for long periods after initial infection. When the germ becomes active, it produces fatigue, weight loss, and a dry cough. Chest pains can occur and prolonged coughing and weakening of the individual can result.

A person in good health may be able to resist the TB germ, but in some cases the disease wins out. Sometimes the infected person may develop and get over a mild case of TB. However, the germs remain dormant in the person's body and can become active at a later date when stress or other illnesses weaken the individual.

Tests for Detecting TB exist and are effective. If TB is discovered there are medicines which, when coupled with rest and medical care, can cure this disease. Children and their parents all should take a TB test. The tests will reveal both active and dormant TB infection.

Prevention and Treatment: Adequate nutrition, rest, and a minimum of stressful conditions can help keep TB from recurring in people who have contracted the disease in the past. Treatment which once consisted of long periods of rest and quiet is now aided by a number of drugs which have dramatically shortened the hospitalization and have reduced communicability. While these drugs are 95 percent effective, patients must continue taking medication long after they leave the hospital.

Implications for the EPSDT Worker: Since TB is often associated with poverty and unhealthy living conditions, some people feel ashamed when informed that they or their children have this disease. However, TB does not recognize social barriers, and attitudes of shame should be dispelled with the true facts about this disease.

Discovery of TB means that all persons who have had close contact with the patient should be tested for the disease. The EPSDT worker should inform parents and peers of children with TB of the need for examination.

VENEREAL DISEASE

Venereal disease is any infectious disease transmitted from person to person almost exclusively through intimate, usually genital, body-to-body contact. The two main venereal diseases in the United States are syphillis and gonorrhea. There are, however, other venereal diseases including urethritis, vaginitis, yeast infections, urinary tract infections, pubic lice, and herpes genitalis.

The most dangerous venereal diseases are syphilis and gonorrhea (or "clap"). It is estimated that annually about 70,000 people in the United States contract syphilis and about 1,700,000 contract gonorrhea. Most venereal diseases are contracted by individuals between the ages of 15 and 24. One out of five, or 21 percent, are teenagers. The reported cases of venereal disease are highest in the urban areas among low-income groups, and are more common in males than in females. Gonorrhea and syphilis represent respectively the first and fourth leading communicable diseases in the United States. More than 2,000 deaths are caused by syphilis each year. Although there are treatment procedures, venereal diseases have been on the increase since 1957.

Causes: With the exception of transmission from mothers to babies, venereal diseses are transmitted by intimate body-to-body, skin-to-skin contact. Syphilis is caused by a germ called the "spirochete," and gonorrhea by a germ called the "gonococcus." Venereal diseases are not transmitted by germs from dirty dishes, toilet seats, or door knobs; they are transmitted by sexual intercourse. Thus, it follows that there is never an isolated case of veneral disease; it has to be acquired from some other infected person.

Syphilis: Many times, the person infected with syphilis may not have symptoms, or the symptoms may be so mild as to go unnoticed. Because the symptoms of syphilis resemble those of other diseases, it is frequently called "The Great Imitator."

About 10 to 90 days after exposure to infection, a painless sore (chancre) may form at the point where the germ entered the body. This is called the primary stage of syphilis. The chancre may appear on the penis, the lips, in the vagina or rectum. The sore may resemble a pimple and probably will not hurt, nor be itchy. It may go unnoticed because of its location or size, and even if untreated, will go away.

A secondary stage of syphilis often begins some weeks after the disease is acquired. As in the primary stage, the person is still infectious and can spread the disease to others. Common symptoms in this stage are sore throat, headache, fever, skin rash, or loss of hair. As in the first stage, the secondary symptoms will disappear without treatment, but the disease is still very active.

A latent period follows the secondary stage, during which there

are no signs of the disease. In untreated cases, the disease may alternate between the secondary and latent stages for a period of from two to four years. After about two years, however, the disease usually lapses into a period of latency which may last from two up to 30 years. At the end of this period many victims become sick with heart disease, blindness, or neurological or mental diseases, all the result of untreated syphillis. Blood tests are available as an aid in diagnosing syphillis and should be given if syphillis is suspected. The disease should be treated as soon as it is discovered.

Gonorrhea: In the male, the main signs of gonorrhea are discharge of pus from the penis or a burning sensation during urination. These signs usually appear three to four days after exposure, but the incubation period can be nine days or longer.

Gonorrhea is positively diagnosed by microscopic identification of germs on a slide on which some of the pus has been smeared. Positive identification by laboratory examination is advised since not all men will have obvious symptoms.

Women with gonorrhea may have a vaginal discharge resulting from a pelvic infection, or they may have no obvious symptoms. Diagnosis in women and in men without obvious symptoms requires a microscopic examination of a culture on which organisms of the suspected infection have been grown.

Patients can be reinfected with either or both syphilis and gonorrhea and can have both at the same time.

Treatment and Prevention: Both syphilis and gonorrhea are readily treated with some form of penicillin. For patients allergic to penicillin, other antibiotics can be used.

The keystone of veneral disease control is implementation of case finding programs. These include interview of patients and discovery, diagnosis, and treatment of all their sexual contacts. Some venereal diseases are detected during premarital and prenatal examinations. The availability of diagnostic and treatment facilities as well as education of the public about the transmission and symptoms of VD are steps toward control. Immediate treatment of the infected person, as well as his or her sexual contacts, is essential since experience indicates that in addition to the source of his or her infection, the average patient may be expected to name anywhere from 20 to 70 sexual contacts over the last 3- to 6-month period. Any contact not found and treated may develop the disease and pass it on to others.

The community worker can make a substantial contribution to the control of venereal diseases by helping the patient obtain treatment and by assisting the official health agency in locating the patient's sexual contacts.

In the case of sexually mature teenagers, clear and complete information about VD and its prevention should be provided and ac-

companied by an opportunity to discuss this topic with trained health workers.

Implications for the EPSDT Worker: Many patients are shocked when they are informed that they have venereal disease. Objective information about the health aspects of venereal disease should be dispersed without question or condemnation of a person's sexual behavior. Reaching and treating all sex partners is crucial in order to protect the patient from reinfection. In the effort to find possible contacts, confidentiality must be assured.

OTHER GENITO-URINARY DISEASES

Nonspecific Urethritis in males is characterized by an inflammation of the urethra, the tube that runs through the penis. There is often a discharge which is not as thick as that which occurs with gonorrhea. There is no specific cure for this disease although symptoms may disappear by themselves. Some antibiotics seem to help clear up this problem.

Vaginitis is an inflammation of the vagina by microscopic organisms which can cause itching and vaginal discharge. It is not a dangerous disease but can be very uncomfortable and there is some indication that after long infection it may make women more susceptible to cervical cancer. Drugs exist which can clear up this condition.

Yeast Infection is caused by a microscopic fungus which is present in many women and can begin to grow when a woman's resistance is low because of illness. In some cases, antibiotics, birth control pills, pregnancy, or diabetes can be associated with yeast infections. The symptoms of yeast infection are itching and/or a thick vaginal discharge. Treatments exist to control this problem.

Urinary Tract Infections are caused by bacteria which can attack the bladder or kidneys. Cystitis, inflammation of the bladder, is a common urinary tract infection occurring most often in women. It is characterized by a severe burning pain which makes urination difficult. If left untreated it can cause serious complications. Sulfa drugs are the recommended treatment but there is some evidence that these drugs are not safe for black people who might have a blood condition making them sensitive to sulfa drugs. A test can be used by a doctor to determine this sensitivity, and if it is present, alternative drugs can be used.

Herpes are sores caused by a virus. Herpes is a little understood disease which often subsides by itself. However, herpes can

produce widespread infections in a child during birth if the mother is infected. In some cases, herpes can lead to cervical cancer. This disease should be closely watched by a doctor to avoid complications.

Crab Lice are small blood sucking creatures which attach themselves to the skin of an infected person and cause itching. Normal washing does not remove these lice but special lotions can kill them.

VISION

Twelve million children in the United States have eye problems. Vision problems can be especially responsive to early treatment. They are, however, not easy to detect in the young child. Vision screening of young children tests for dominance of one eye over the other, coordination of the two eyes, muscle development and control, and color perception.

Symptoms: Parents can help detect possible vision problems in their children by watching for any of the following symptoms: frequent blinking or rubbing the eyes, watery eyes, inflammation, squinting at close objects, "crossing" of the eyes, frequent crying, complaints of blurred vision, headaches after close work, looking at things out of one eye.

Lazy Eye: The main concern about a child whose one or both eyes appear crossed is that one eye may become blind if efforts are not made to make the child use it. A cross-eyed child will see double. Because this is an uncomfortable sensation, he or she learns to ignore the image seen by one of the eyes. This is the "lazy eye." If this goes on long enough, it becomes impossible to bring back vision in that eye. This is why it is important for an infant's eyes to be examined promptly when there is a question about whether they are crossed.

Blindness: Blindness may be congenital (from birth) or acquired at some later point in life. What is described as legal blindness may be very different than what is generally thought. A child may have peripheral vision (sides only), cone vision (just straight ahead), vision in one or the other eye, no night vision, etc. All have different implications for education and normal living. It is important to know that a child with even minimal vision is not as handicapped as a child with no vision and that children with no vision can still perform a number of tasks.

Implications for EPSDT Workers: EPSDT provides eye examinations and corrective eyeglasses if needed. Since vision problems may worsen over time and can seriously hamper progress in school, EPSDT workers should emphasize the importance of periodic eye examinations and care.

Parents with a visually handicapped child are likely to have special concerns about how much attention they should give the child, about safety, about the child's social and emotional development, and about the child's intelligence, learning ability, and socialization. The EPSDT worker should inform parents about special programs for handicapped children and their parents and should provide informa-

tion and literature which could help the parent. These might be obtained from the EPSDT supervisor or directly from organizations or agencies which deal with child disability.

In families with a blind child, the parents are likely to require counseling about how to help the child grow and develop. It is important for blind children to remain active, to be loved, and to develop self-reliance and a sense of personal achievement. The home environment is crucial in this process. Parents may become discouraged, however, and the EPSDT worker should try to help them remain patient with their child.

SECTION V

SELECTED REFERENCES

The interested reader may wish to explore in greater detail some of the topics discussed in this booklet. The following references have been selected because of their relevance to the issues of child growth and development, and because they present these issues clearly and in a way which may be useful for EPSDT workers. These references, arranged by subject, are selected samples of the extensive literature available about child health, growth, and development.

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